

Attorney's Docket No. K&A 23-0460
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APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **JAMES HOWELL**, a citizen of
UNITED STATES OF AMERICA, have invented a new and useful
AUXILIARY HANDLE DEVICE FOR USE WITH
CONVENTIONAL HANDHELD SCREWDRIVERS of which the
following is a specification:

AUXILIARY HANDLE DEVICE FOR USE WITH CONVENTIONAL HANDHELD SCREWDRIVERS

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BACKGROUND OF THE INVENTION

10 Field of the Invention

The present invention relates to and more particularly pertains to a new auxiliary handle device for use with conventional handheld screwdrivers for providing additional torque and reducing
15 muscle strain.

Description of the Prior Art

The use of screwdrivers with specialized handles is known in
20 the prior art. Illustrative examples include: U.S. Patent No. 5,551,323; U.S. Patent No. 6,148,701; and U.S. Patent No. Des. 436,822.

While these devices fulfill their respective, particular
25 objectives and requirements, the need remains for a device that is superior in working with a wide range of conventional screwdrivers.

SUMMARY OF THE INVENTION

While the manual screwdriver is a very useful tool, there are significant drawbacks associated with its use. Foremost is the ergonomic oversight in handle design, which contributes to the frustration and even pain that is commonly experienced by consumers when attempting to start and/or drive screws. Although many are knurled or otherwise grooved to provide better gripping, the cylindrical design of the screwdriver handle demands that power to drive and particularly to start a screw is supplied in large part from the consumer's hand and fingers. Only a limited amount of arm force can be applied to a screwdriver handle before one's hand begins to slip. Trying to drive a number of screws into hardwood or other resilient surfaces often results in sore hands.

The present invention is a specially designed attachment for screwdriver handles that features a unique ball-shaped handle. Variations on the basic ball shape include a "pistol grip" type handle, as well as other hand-friendly ergonomic designs. The base of the device, where it affixes to the screwdriver handle, would feature a circular "mouth" large enough in circumference to permit the end of most any standard screwdriver handle to be inserted to a depth of approximately two inches (2"). To secure the mouth of the device to the screwdriver handle a number of commonly used methods could be used including butterfly screws, spring clamps or a drill chuck type of clamp.

Use of the present invention would be very simple and straightforward. First, the user would slip the mouth of the device over the end of a selected screwdriver handle and securely clamped in place. Once affixed to the screwdriver handle the device would 5 be used in very much the same way as any other screwdriver.

The present invention offers a number of important benefit and advantages. Foremost, due to the device's comfortable, oversized and ergonomically designed handle consumers would be 10 better capable of using the strength of their arms as well as their hands, important when trying to start a screw in a hard surface. Additionally, the larger handle of this practically designed device would allow more leverage or torque to be applied when driving screws, making this task much easier and quicker. Another 15 important benefit is related to this product's versatility. Designed to quickly and easily attach and remove, every tool found in the consumer's box possessing similar handles could make use of this device.

20 There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that 25 will be described hereinafter and which will form the subject matter of the claims appended hereto.

The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with 30 particularity in the claims annexed to and forming a part of this disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than
5 those set forth above will become apparent when consideration is
given to the following detailed description thereof. Such
description makes reference to the annexed drawings wherein:

Figure 1 is a schematic perspective view of a new auxilary
10 handle device for use with conventional handheld screwdrivers
according to the present invention.

Figure 2 is a schematic perspective view of the present
invention with a spring clamp retaining means.

15 Figure 3 is a schematic perspective view of the present
invention with a chuck retaining means.

Figure 4 is a schematic side view of the present invention
20 showing flutes for the retaining means.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to
25 Figures 1 through 4 thereof, a new auxilary handle device for use
with conventional handheld screwdrivers embodying the principles
and concepts of the present invention and generally designated by
the reference numeral 10 will be described.

30 As best illustrated in Figures 1 through 4, the auxilary handle
device for use with conventional handheld screwdrivers 10
generally comprises a handle portion 20 designed for being grasped
by a human hand, and a coupling portion 30. The coupling portion

30 selectively receives a handle of a conventional screwdriver 2. The coupling portion 30 is operationally coupled to the handle portion 20 such that rotation of the handle portion 20 in a first direction imparts rotation in the first direction to the coupling portion 30 and to the conventional screwdriver 20 in turn.

5 Preferably, the coupling portion 30 further comprises a cylindrical perimeter wall 32 forming a cavity portion 34. The cavity portion 34 slideably receives a portion of the handle of the 10 conventional screwdriver 2.

15 Additionally, the coupling portion 30 may further include a retaining means 40. The retaining means 40 selectively secures the portion of the handle of the conventional screwdriver 2 to the coupling portion 30.

20 A leverage bar member 25 may be operationally coupled to the coupling portion 30. The leverage bar member 25 is positioned such that it is substantially perpendicular to the handle portion 20 when the leverage bar member 25 is operationally coupled to the coupling portion 30. The leverage bar member 25 facilitates application of additional torque to the conventional screwdriver 2.

25 In an embodiment the retaining means 40 comprises a threaded aperture 36 extending through the perimeter wall 32, and a screw 42 which can be threaded through the aperture 36 to create an interference fit with the portion of the handle of the conventional screwdriver 2 and an interior surface of the perimeter wall 32.

In a further embodiment a pair of threaded apertures 34 and a pair of screws 42 are utilized as the retaining means 40 to create an interference fit with the portion of the handle of the conventional screwdriver 2.

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In another embodiment the retaining means 40 is a spring clamp 44.

In a further embodiment the retaining means 40 further
10 comprises a series of flutes 46 positioned around an interior portion
of the perimeter wall 32. The flutes 46 are aligned with a series of
grooves extending along the handle of the conventional screwdriver
2 when the handle is received in the coupling portion 30. The
flutes 46 and the grooves inhibit rotation of the screwdriver 2 with
15 reference to the coupling portion 30.

In still a further embodiment the retaining means 40 further
comprises a chuck assembly 50. The chuck assembly 50 includes a
jaw portion 52 closable around the portion of the handle of the
20 conventional screwdriver 2.

With respect to the above description then, it is to be realized
that the optimum dimensional relationships for the parts of the
invention, to include variations in size, materials, shape, form,
25 function and manner of operation, assembly and use, are deemed
readily apparent and obvious to one skilled in the art, and all
equivalent relationships to those illustrated in the drawings and
described in the specification are intended to be encompassed by
the present invention.

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Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.